

CDC Travelers' Health, 2018

Gary Brunette, MD

Chief, Travelers' Health Branch

CDC Division of Global Migration and Quarantine

Kelly Holton

Chief Communications Officer, Travelers' Health Branch

CDC Division of Global Migration and Quarantine

May 22, 2018

Objectives

1. Develop or increase awareness of current travel health concerns
2. Learn steps travelers can take before and during travel to stay healthy and safe
3. Learn about resources CDC offers to help travelers and their clinicians



CDC Travelers' Health Mission

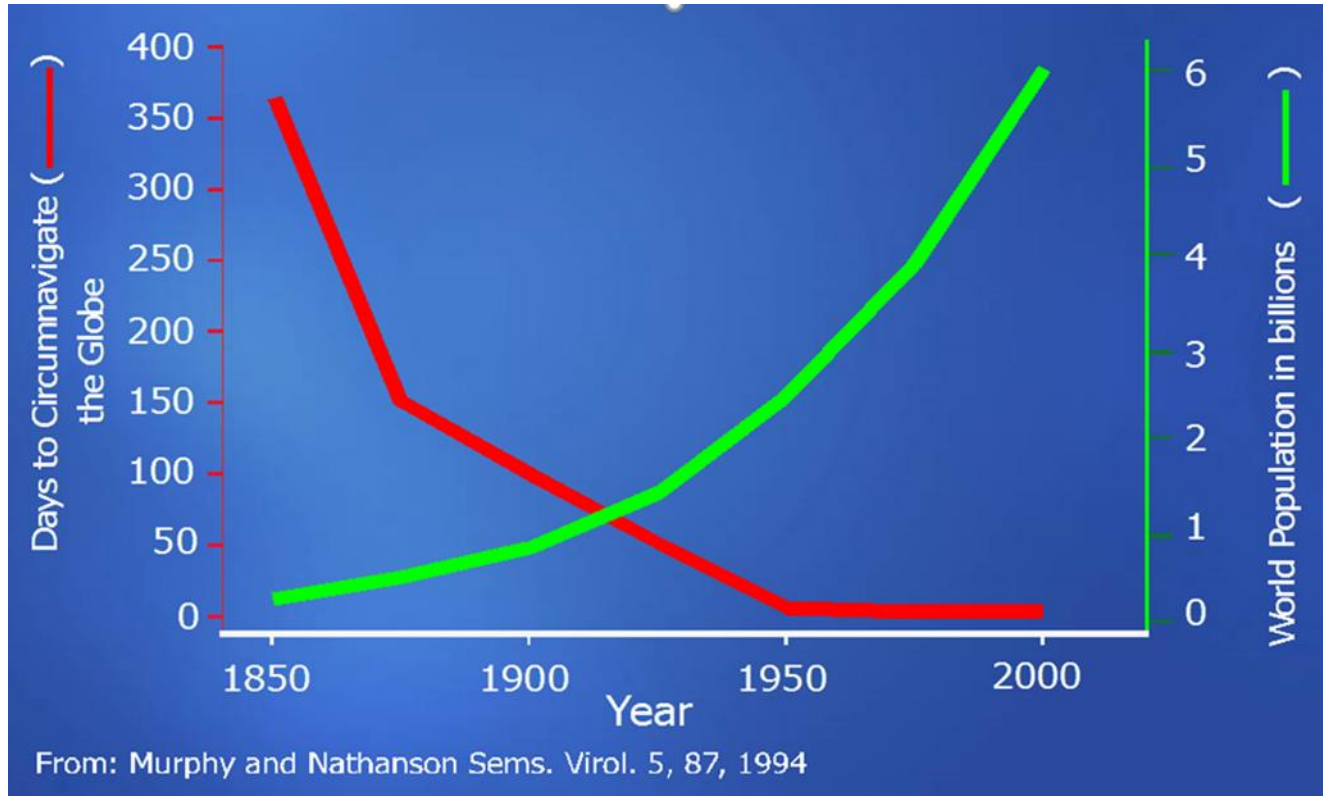
To help reduce illness and injury
in US residents traveling
internationally or living abroad



Travelers' Health Activities

- Studying and monitoring illness and injury among travelers
- Monitoring disease outbreaks and other health threats around the world that may affect travelers
- Providing travel health advice, including vaccine recommendations and requirements for international travelers and their healthcare providers
- Delivering health communication and education to a variety of audiences
- Developing and distributing event-specific advice regarding the risks of travel during an emergency

Speed of Global Travel in Relation to World Population Growth



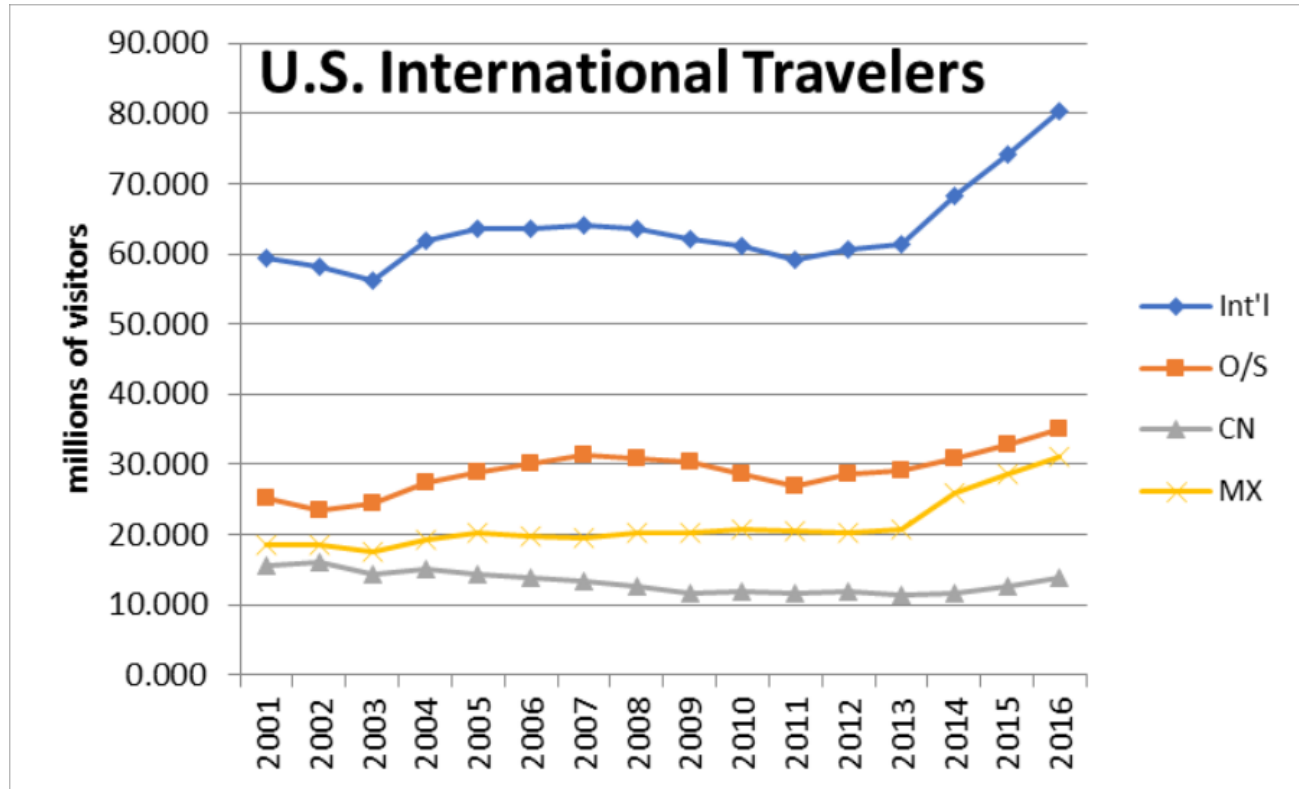
Airline Routes, 2012

59,036 routes between 3,209 airports on 531 airlines



Source: <http://openflights.org/data.html>

On the rise: US Resident Travel to International Destinations



Source: National Travel and Tourism Office, U.S. Department of Commerce

Reasons for International Travel

Most common reasons

- Leisure (55%)
- Visiting friends and relatives (27%)

Other reasons

- Business
- Education
- Humanitarian aid
- Religion/pilgrimage
- Health care



US Department of Commerce, International Trade Administration, 2016

Current and Emerging Topics

Travel Health in the News

TRAVEL+LEISURE

A Yellow Fever Outbreak Is Happening in Brazil — Here's What Travelers Should Know



A Yellow Fever Outbreak Is Happening in Brazil — Here's What Travelers Should Know



Photo: iStockphoto/Getty Images

Travel + Leisure & Advisor

US travel warning: 250% rise in diseases from mosquitoes, fleas and ticks in 13 years, says report

'Malaria and yellow fever are no longer transmitted in the United States but have the potential to be reintroduced,' says official report

Simon Calder Travel Correspondent | @SimonCalder | Wednesday 3 May 2018 10:58 BST | [CDS](#) [Comments](#)



27

Like to follow The Independent Travel



Yellow Fever Circles Brazil's Huge Cities



On the streets of Rio de Janeiro, Brazil, there is a health worker in a white shirt and blue pants, possibly a health worker, interacting with a person in a blue shirt.

Photo: iStockphoto/Getty Images

song" a loudspeaker blared recently in the town called Jardim Botânico. "We've got

U.S. EDITION | Mon, May 14, 2018

Newsweek

U.S. | World | Business | Tech & Science | Culture | Sports | Health | Opinion

MEASLES IN EUROPE: VACCINATIONS URGED BY CDC BEFORE TRAVELING

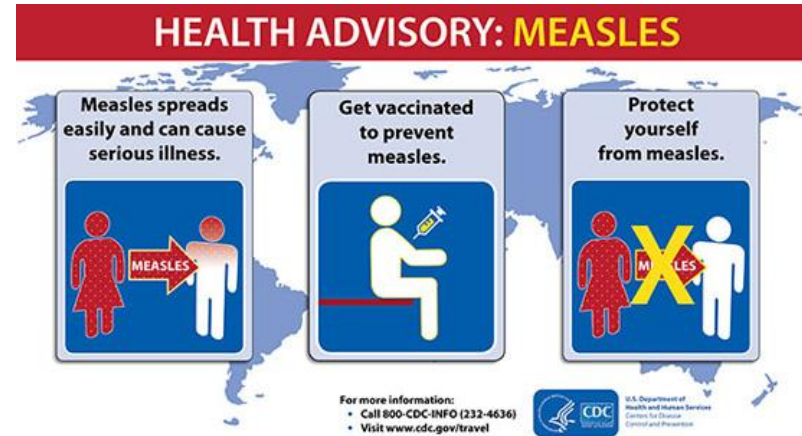
BY JESSICA FINGER ON 1/15/17 AT 4:52 PM

CNN Health | Food | Fitness | Wellness | Parenting | Vital Signs

Zika virus: What to know

Measles

- Highly contagious
- Most US measles cases result from international travel
- Ongoing measles outbreaks in popular tourist destinations like England, France, Greece, Italy, the Philippines, and Indonesia as well as the DRC, Romania, Serbia, and Ukraine
- Travelers should be vaccinated before their trip, including infants 6 months and older



Malaria

- Symptoms usually appear in 7-30 days but can take up to a year to develop
- Malaria occurs in Africa, Central and South America, parts of the Caribbean, Asia, Eastern Europe, and the South Pacific
- Now there are outbreaks in areas that do not usually report malaria: South Africa, Brazil, and Cyprus
- Every year about 1,700 cases of malaria and 5 deaths occur among international travelers from the United States
- Travelers can protect themselves from malaria by taking prescription medicine and preventing mosquito bites

Distribution of Malaria



Dengue



- Symptoms usually begin 4 – 7 days after the mosquito bite and typically last 3 – 10 days
- Many people with dengue have mild illness, but there is a form of dengue that can cause severe symptoms that include intense stomach pain, repeated vomiting, bleeding from the nose or gums, and death
- Occurs in parts of the Caribbean, Central and South America, Western Pacific Islands, Australia, Southeast Asia, and Africa
- Currently there is no vaccine or medicine to prevent or treat dengue
- Travelers can protect themselves by preventing mosquito bites

Distribution of Dengue



Yellow Fever

- About 15% of people who get yellow fever develop serious illness that can lead to bleeding, shock, organ failure, and sometimes death
- Travelers to certain parts of South America and Africa are at risk for yellow fever
- Travelers can protect themselves from yellow fever by getting yellow fever vaccine and preventing mosquito bites



INTERNATIONAL CERTIFICATE OF VACCINATION FOR PROPHYLAXIS Certificat International de vaccination ou de prophylaxie			
This is to certify that <small>Il est certifié que</small>	① <u>John Mary Doe</u> <small>Nom - nom</small>	② <u>22 March 1960</u> <small>Date of birth - date de naissance</small>	③ <u>United States</u> <small>Country - pays de résidence</small>
④ <u>Passport number</u> <small>Numéro du passeport</small>		⑤ <u>John Mary Doe</u> <small>Signature of holder - signature du titulaire</small>	
<small>On the basis of the following facts, a qualified medical officer has determined that the holder of this certificate is entitled to the following vaccination or vaccinations:</small> <small>Sur la base des faits suivants, un médecin qualifié a déterminé que le titulaire de ce certificat a droit à la ou aux vaccinations suivantes:</small>			
⑥ <u>Yellow Fever</u> <small>Disease or diseases to be vaccinated - maladie ou maladies à vacciner</small>		⑦ <u>in accordance with the International Health Regulations</u> <small>conformément aux Règlementations sanitaires internationales</small>	
<small>Signature of physician or other authorized official</small> <small>Signature du médecin ou d'un autre fonctionnaire autorisé</small>			
Signature of physician or other authorized official <small>Signature du médecin ou d'un autre fonctionnaire autorisé</small>	Date <small>Date</small>	Registration and basis for vaccine or prophylaxis <small>Enregistrement de la vaccination ou de la prophylaxie</small>	Certificate valid until <small>Certificat valide jusqu'à</small>
⑧ <u>Yellow Fever</u>	⑨ <u>15 June 2000</u>	⑩ <u>John M. Smith, MD</u>	⑪ <u>25 June 2000</u>
		⑫ <u>Yellow (or not) *</u>	⑬ <u>Life w/ passport valid until</u>
			⑭ <u>[Signature]</u>

Travelers should carry their ICPV ("yellow card") to show proof of vaccination

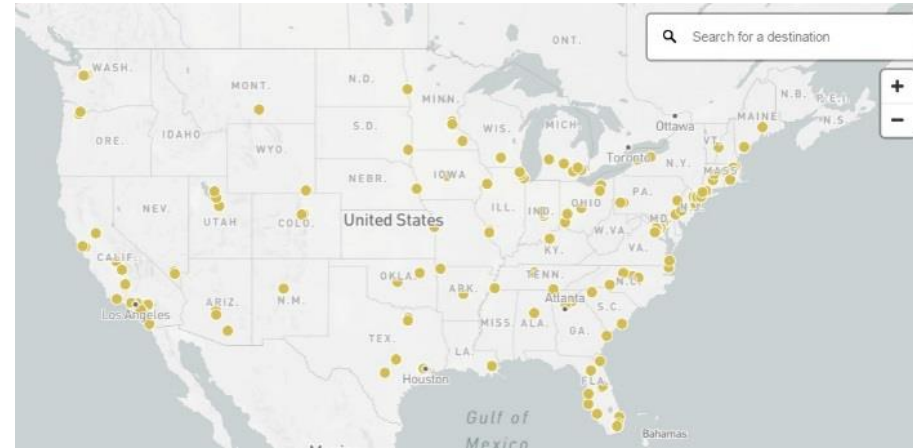
Yellow Fever in Brazil

- Ongoing outbreak
- Cases in unvaccinated travelers to Brazil
- Expanded list of areas in which yellow fever vaccination is recommended.
- In addition to areas where vaccine was already recommended, vaccine now also recommended in:
 - All of Espírito Santo, Paraná, Santa Catarina, and Rio Grande do Sul States
 - All of São Paulo and Rio de Janeiro States, including the cities of São Paulo and Rio de Janeiro and all coastal islands
 - A number of cities in Bahia State



Yellow Fever Vaccine Shortage

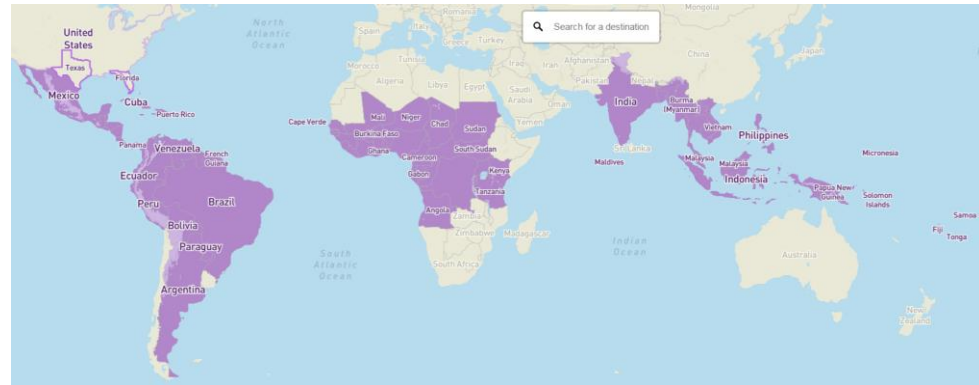
- Production issues for US-licensed YF-Vax
 - YF Vax ran out of stock in July 2017
 - Authorization from FDA to use alternate vaccine (Stamaril)
- Number of clinics providing vaccine has gone from ~4,000 to ~250
- Travelers should plan ahead to get the vaccine and be prepared to drive some distance from home



Travelers can use CDC's interactive Stamaril map to find the nearest clinic

Zika: Still a Risk

- Areas with a risk of Zika include countries in Africa, Asia, the Caribbean, Central America, North America, South America, and the Pacific Islands
- Virus spread mostly by the bite of an infected *Aedes* species mosquito
- Can be spread through sex and through blood transfusions
- Can be passed from a pregnant woman to her fetus
- No vaccine or medicine to prevent or treat Zika



Zika Prevention: Pregnancy

- Pregnant women should **NOT** travel to an area with a risk of Zika
- If the partner of a pregnant woman travels to an area with a risk of Zika, the couple should use condoms or not have sex for the rest of the pregnancy
- CDC is updating guidance for those planning pregnancy. For up-to-date information, visit www.cdc.gov/pregnancy/zika/women-and-their-partners.html



Zika Prevention

- **Prevent transmission through mosquito bites**
 - Use EPA-registered insect repellent with an active ingredient such as DEET or picaridin
 - Wear long-sleeved shirts and long pants
 - Sleep in places with air conditioning and window and door screens to keep mosquitoes outside, or use a bed net
 - Use insect repellent for 3 weeks after returning from a trip to keep local mosquitoes from getting Zika
- **Prevent sexual transmission**
 - Use condoms every time you have sex while traveling and after you return home



Traveler's Diarrhea

- Most common travel-related illness
- Prevention
 - Safe food and water choices
 - Handwashing
 - Taking bismuth subsalicylate
- Treatment
 - Fluid replacement
 - Taking bismuth subsalicylate and loperamide
 - Taking antibiotics (often just one dose)



Other Risks for Travelers

- Accidental injury
- Environmental hazards
- Altitude
- Animal bites, stings, and envenomation
- Psychiatric problems
- Skin and soft tissue infections
- Crime and assault



Preventive Actions

Pre-Travel Medical Visit

- CDC recommends most travelers see a provider 4-6 weeks before their trip
- Traveler's risk is assessed based on
 - Traveler health history
 - Travel itinerary
- Only a provider can give
 - Vaccines
 - Prescription medications
 - Counseling and advice



Risk Assessment: Health History

- Age-specific issues
- Underlying illness, immunosuppression
- Systems review
- Medical history
- Medication use
- Vaccination history
- Allergies
- Contraindications to vaccines and medications



Risk Assessment: Travel Itinerary

- **Full itinerary**
 - Dates, duration, stopovers
 - Seasonal considerations
- **Styles of travel**
 - Rural vs. urban
 - Budget vs. luxury
- **Accommodation**
 - Hotel vs. camping
- **Activities**
 - Business vs. tourism
 - Adventure, safari
 - Missionary/humanitarian/NGO



Immunizations for Adult Travelers

- **Routine immunizations**
 - Pre-travel medical visits are opportunities to make sure adults are up to date on their routine immunizations
- **Required immunizations for travel**
 - Yellow fever (certain countries)
 - Meningococcal vaccine (all travelers) and polio (travelers from certain countries) for travel to Saudi Arabia for the Hajj



Recommended Immunizations for Travel

- Cholera
- Hepatitis A
- Hepatitis B
- Japanese encephalitis
- Meningococcal
- Polio
- Rabies
- Typhoid
- Yellow fever



Recommended vaccines vary by destination, health history, and planned activities

Travel Medications

- Malaria
 - Prophylaxis and self-treatment
 - Chloroquine, atovaquone/proguanil (Malarone), doxycycline, mefloquine (Lariam), and primaquine
- Diarrhea
 - Bismuth subsalicylate and loperamide
 - Fluoroquinolones and azithromycin
- Altitude
 - Acetazolamide
- Motion sickness
 - Scopolamine and dimenhydrinate (Dramamine)



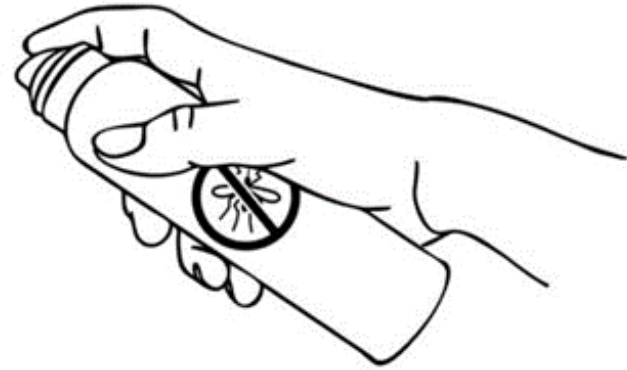
Food and Water Precautions

- Drinks that are bottled and sealed
- Selection of foods
 - well-cooked and hot
 - fruits you can peel
- Avoidance of
 - salads, raw vegetables
 - unpasteurized dairy products
 - food from street vendors
 - ice
- Handwashing



Insect and Mosquito Precautions

- Outdoor measures
 - EPA-registered insect repellent
 - Clothing that covers exposed skin
 - Treating clothing with permethrin
 - Pyrethroid coils to repel insects in the area
- Indoor measures
 - Staying in rooms with air conditioning or window screens
 - Permethrin-impregnated bed nets



Animal Precautions

- Risks
 - Animal bites and scratches
 - Envenomations
 - Snakes, scorpions, spiders
 - Marine animals
- Precautions
 - Avoid all animals, even pets
 - If you are bitten, scratched, or stung, seek medical care right away

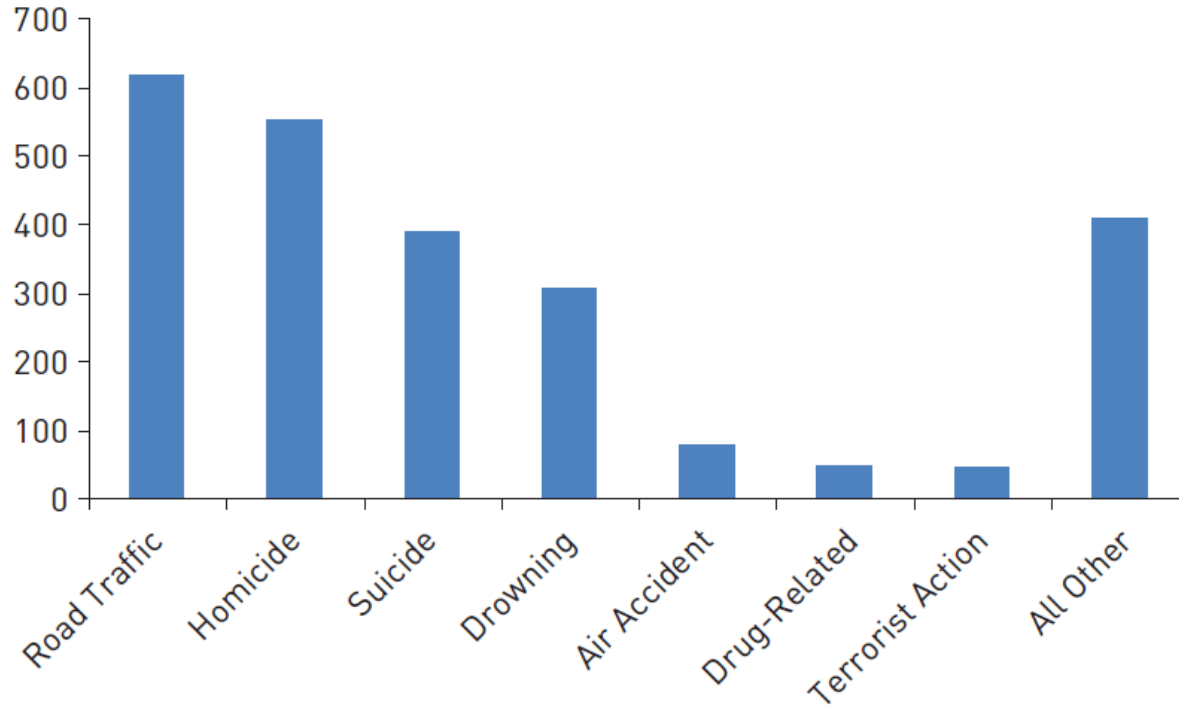


Safety Precautions

- Wear a helmet
- Wear seat belts
- Drink responsibly
- Stay alert in crowds
- Follow local laws and customs
- Understand local crime risks



Leading Causes of Injury Death for US Citizens in Foreign Countries, 2011-2013



¹ Data from US Department of State. Death of US citizens abroad by non-natural causes. Washington, DC: US Department of State; 2016 [cited 2016 Mar. 24]. Available from: <http://travel.state.gov/content/travel/english/statistics/deaths.html>.

² Excludes deaths of US citizens fighting wars in Afghanistan or Iraq, and deaths that were not reported to the nearest US Embassy or Consulate.

Emergency Plan

Planning for Emergencies

- Prepare for travel emergencies before leaving home
 - Find the contact information of the US embassy or consulate nearest your destination
 - Research how to access health care services where you are going
- Leave a copy of your passport, credit cards, and itinerary with a trusted friend or relative
 - Arrange to check in regularly
- Register in the Smart Traveler Enrollment Program (<https://step.state.gov>)
 - Allows the US Department of State to find you in case of an emergency



Preparing for Illness and Injury

Pack a health kit

- Pack important items to prevent and treat common injuries and illnesses
- Include prescription medicines, with enough for your trip plus extra in case of travel delays
- Don't assume over-the-counter items will be easily available

Know when to get medical help

- Diarrhea AND a high fever (above 102° F)
- Bloody diarrhea
- Fever or flu-like illness in a malaria risk area
- Animal bite or scratch
- Car accident or other serious injury
- Sexual assault



Travel Insurance

- Find out if your health insurance covers you abroad
- Consider supplemental travel health insurance and medical evacuation insurance
- Be prepared to pay out of pocket at the time of treatment

[CDC](#) > [Home](#) > [Resources](#) > [Resources for Travelers](#)

Insurance



There are 3 types of insurance you should consider for your trip: trip cancellation insurance, travel health insurance, and medical evacuation insurance. These will cover different situations and may give you financial peace of mind, as well as allowing for safe and healthy travel.



Trip Cancellation Insurance

Trip cancellation insurance covers your financial investment in your trip, such as flights, cruises, or train tickets. Carefully examine the policy to make sure that it covers what you need it to cover, including cancellation if you or a close family member gets sick. Depending on the policy, trip cancellation insurance might not cover any medical care you need overseas, so you may need a separate travel health insurance policy.

Travel Health Insurance

If you need to go to a hospital or clinic overseas, you will probably be asked to pay out-of-pocket for any services, which could be very expensive. Even if a country has nationalized health care, it may not cover people who are not citizens. Before you go, you should consider your insurance options in case you need care while you're abroad, especially if you have existing health conditions, will be away from home for a long time, or will be engaging in adventure activities such as scuba diving or hang gliding.



If you have health insurance in the United States, find out if it will cover emergencies that happen abroad. Ask if your policy has any exclusions, such as for preexisting conditions or adventure activities. If your health insurance coverage is not adequate, consider buying a short-term supplemental policy. Look for a policy that will make payments to hospitals directly.

Medical Evacuation Insurance

If you are traveling to a remote destination or to a place where care is not likely to be up to US standards, consider buying medical evacuation insurance. This can be purchased separately or as part of your travel health insurance policy. This insurance will pay for emergency transportation from a remote or poor area to a high-quality hospital. Make sure that the policy provides a 24-hour physician support center.



Finding a Provider

This list is not all-inclusive, but these resources provide information about purchasing travel health and medical evacuation insurance:

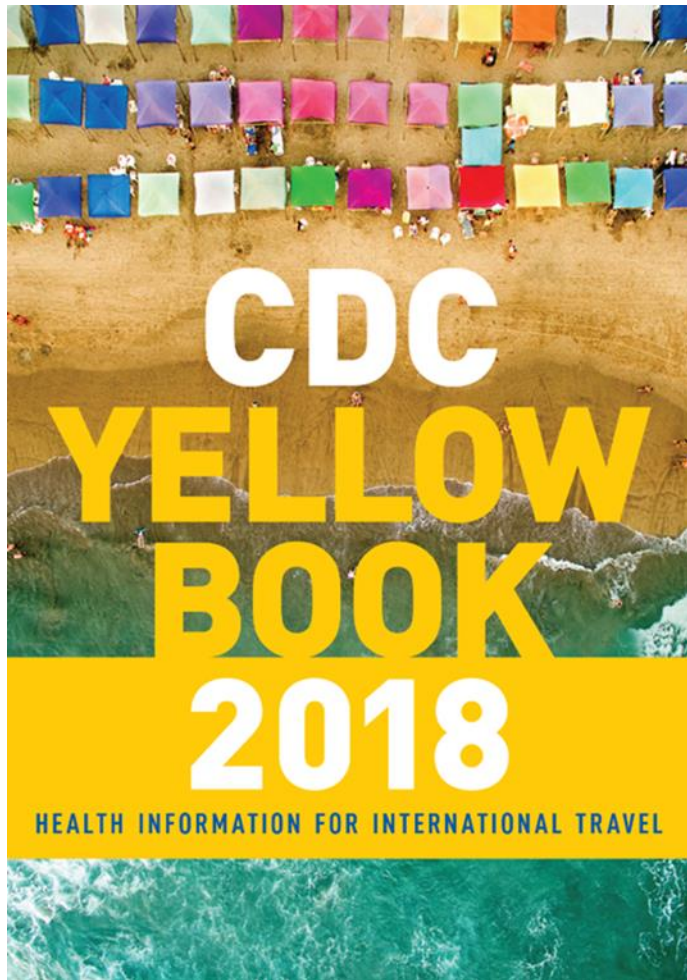
- Department of State (www.travel.state.gov)⁽¹⁾
- International SOS (www.internationalsos.com)⁽²⁾
- UnitedHealthcare Global (www.uhcsafetrip.com)⁽³⁾
- International Association for Medical Assistance to Travelers (www.iamat.org)⁽⁴⁾
- American Association of Retired Persons (www.aarp.org)⁽⁵⁾

Getting Care After Travel

- Most post-travel infections present soon after travel, but incubation periods vary from weeks to years, and some are asymptomatic
- Common post-travel symptoms include
 - Fever
 - Skin and soft tissue infections
 - Persistent travelers' diarrhea





CDC Resources



- Online (free) at www.cdc.gov/yellowbook
- Purchase from Oxford University Press and at major booksellers
 - Print edition
 - E-book
- Available as a mobile app on the App Store and Google Play Store

Travelers' Health Website

 Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People™

SEARCH 

CDC A-Z INDEX ▾

Travelers' Health

Home

Destinations

Travel Notices

Find a Clinic +

Disease Directory

Information Centers +

For Travelers +

For Clinicians +

Travel Industry +


Yellow Book +


Mobile Apps

RSS Feeds

CDC

VACCINES. MEDICINES. ADVICE.

 For Travelers



Where are you going?
-- Select One -- ▾

What kind of traveler are you?
(optional)

☐ Traveling with Children

☐ Chronic Disease

☐ Cruise Ship


☐ Extended Stay/Study Abroad


☐ Immune-Compromised Travelers

☐ Pregnant Women

☐ Mission/Disaster Relief

☐ Visiting Friends or Family

 For Clinicians



Traveler destination
-- Select One -- ▾

Special travel needs
(optional)

☐ Traveling with Children

☐ Chronic Disease

☐ Cruise Ship

☐ Extended Stay/Study Abroad

☐ Immune-Compromised Travelers

☐ Pregnant Women

☐ Mission/Disaster Relief

☐ Visiting Friends or Family

Travel Notices



- **Level 1, Watch**
 - Follow usual precautions

Measles
- **Level 2, Alert**
 - Use enhanced precautions

Zika
- **Level 3, Warning**
 - Avoid nonessential travel

Ebola (2014 epidemic)

Destination Pages

- Versions for clinicians and travelers
 - Easy-to-read vaccine and medicine charts
 - Advice on food and water safety, bug bite prevention, and other healthy travel behaviors
 - Healthy travel packing list
 - Current travel notices
 - Tips on when to seek care after travel

Health Information for Travelers to India Traveler View



On This Page

- [Vaccines and Medicines](#)
- [Stay Healthy and Safe](#)
- [Healthy Travel Packing List](#)
- [Travel Health Notices](#)
- [After Your Trip](#)

Clinician View

Vaccines and Medicines

Hide

Check the vaccines and medicines list and visit your doctor (ideally, 4-6 weeks) before your trip to get vaccines or medicines you may need.

Find Out Why

Protect Yourself

All travelers

You should be up to date on routine vaccinations while traveling to any destination. Some vaccines may also be required for travel.

[Routine vaccines](#)

Make sure you are up to date on routine vaccines before every trip. These vaccines include measles-mumps-rubella (MMR) vaccine, diphtheria-tetanus-pertussis vaccine, varicella (chickenpox) vaccine, polio vaccine, and your yearly flu shot.

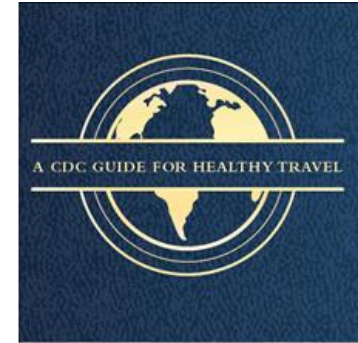
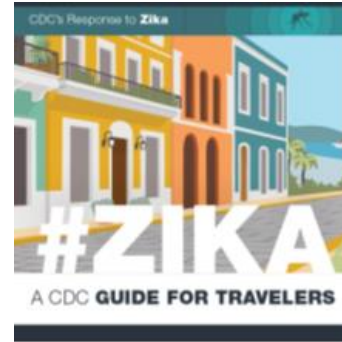


Most travelers

Get travel vaccines and medicines because there is a risk of these diseases in the country you are visiting.

Print Materials for Travelers

- In English and Spanish
- Available free of charge
 - www.cdc.gov/pubs
 - Select "Travel Health" from the "Programs" drop-down menu



Mobile Apps



Outreach Campaigns

Viajo Sin Zika

- Spanish- and English-language Zika campaign focusing on Latinos traveling to Latin America and the Caribbean
- Disseminated through media, social media, advertisements, and partnerships



Think Travel

- Clinician-focused campaign to build awareness of the need to incorporate travel health into patient care
- Coming summer 2018

Stay in Touch

Newsletter and Travel Notice Alerts



Get email updates:

www.cdc.gov/Other/emailupdates/

- Create a user profile
- Add Subscriptions
- Select Travelers' Health (scroll to bottom)



CDC-INFO

National contact center available to answer questions from the public and from healthcare providers



- **Phone calls**

800-CDC-INFO
(800-232-4636)
TTY 888-232-6348

- Monday – Friday
8:00 a.m. – 8:00 p.m. Eastern
- In English and Spanish

- **E-mails**

www.cdc.gov/dcs/ContactUs/Form

CDC-INFO
You have questions? **We have answers.**

CDC's national contact center and publications fulfillment system

Social Media



CDC Travelers' Health



@CDCctravel

figure¹

CDCTravel

Thank you! Questions?

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

